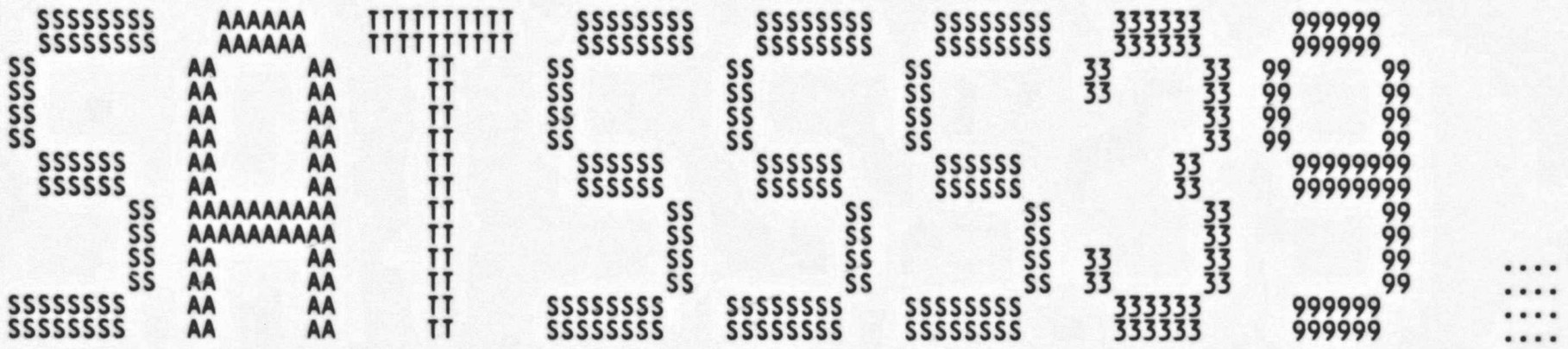
```
UUU         UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  PPPPPPPPPPPP       SSSSSSSSSSS  YYY         YYY
UUU         UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  PPPPPPPPPPPP       SSSSSSSSSSS  YYY         YYY
UUU         UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  PPPPPPPPPPPP       SSSSSSSSSSS  YYY         YYY
UUU         UUU  EEE                    TTT        PPP         PPP  SSS              YYY         YYY
UUU         UUU  EEE                    TTT        PPP         PPP  SSS              YYY         YYY
UUU         UUU  EEE                    TTT        PPP         PPP  SSS              YYY         YYY
UUU         UUU  EEE                    TTT        PPP         PPP  SSS                 YYY   YYY
UUU         UUU  EEE                    TTT        PPP         PPP  SSS                 YYY   YYY
UUU         UUU  EEE                    TTT        PPP         PPP  SSS                 YYY   YYY
UUU         UUU  EEEEEEEEEEE            TTT        PPPPPPPPPPPP      SSSSSSSSS             YYY
UUU         UUU  EEEEEEEEEEE            TTT        PPPPPPPPPPPP      SSSSSSSSS             YYY
UUU         UUU  EEEEEEEEEEE            TTT        PPPPPPPPPPPP      SSSSSSSSS             YYY
UUU         UUU  EEE                    TTT        PPP                        SSS           YYY
UUU         UUU  EEE                    TTT        PPP                        SSS           YYY
UUU         UUU  EEE                    TTT        PPP                        SSS           YYY
UUU         UUU  EEE                    TTT        PPP                        SSS           YYY
UUU         UUU  EEE                    TTT        PPP                        SSS           YYY
UUU         UUU  EEE                    TTT        PPP                        SSS           YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE      TTT        PPP                 SSSSSSSSSSS          YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE      TTT        PPP                 SSSSSSSSSSS          YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE      TTT        PPP                 SSSSSSSSSSS          YYY
UUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE      TTT        PPP                 SSSSSSSSSSS          YYY
```

FILEID**SATSSS39



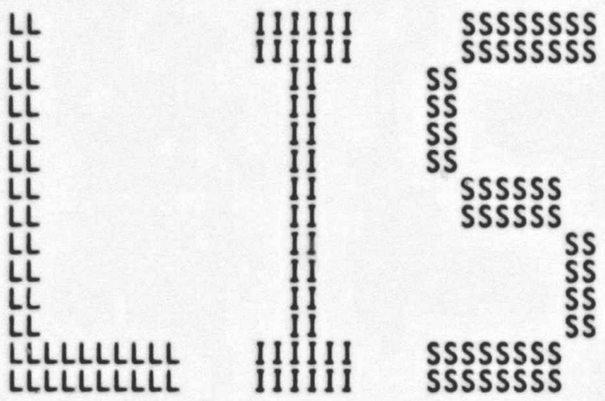


Table of contents

```
0000     1          .TITLE  SATSSS39 SATS SYSTEM SERVICE TESTS  $HIBER (SUCC S.C.)
0000     2          .IDENT  'V04-000'
0000     3
0000     4 ;
0000     5 ;*****************************************************************************
0000     6 ;*                                                                           *
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0000    24 ;*                                                                           *
0000    25 ;*                                                                           *
0000    26 ;*****************************************************************************
0000    27 ;
0000    28
0000    29 ;++
0000    30 ; FACILITY:     SYSTST (SATS SYSTEM SERVICE TESTS)
0000    31 ;
0000    32 ; ABSTRACT:
0000    33 ;
0000    34 ;                    THIS MODULE CONTAINS SUBROUTINES WHICH, WHEN LINKED
0000    35 ; WITH SUCCOMMON.OBJ, FORM TEST MODULE SATSSS39 TO TEST SUCCESSFUL
0000    36 ; OPERATION OF THE $HIBER SYSTEM SERVICE. THE SERVICE IS INVOKED
0000    37 ; UNDER VARIOUS INPUT CONDITIONS WITH VARYING INPUT PARAMETERS. ONLY
0000    38 ; SUCCESSFUL STATUS CODES ARE EXPECTED IN THIS TEST MODULE.  CORRECT
0000    39 ; OPERATION OF THE SERVICE FOR EACH OF ITS ISSUANCES IS VERIFIED BY
0000    40 ; CHECKING FOR AN SS$_NORMAL STATUS CODE, EXPECTED RETURN ARGUMENTS
0000    41 ; AND EXPECTED FUNCTIONALITY PERFORMED.
0000    42 ;
0000    43 ; ENVIRONMENT:  USER MODE IMAGE; NEEDS CMKRNL PRIVILEGE,
0000    44 ;                    DYNAMICALLY ACQUIRES OTHER PRIVILEGES, AS NEEDED.
0000    45 ;
0000    46 ; AUTHOR: THOMAS L. CAFARELLA,          CREATION DATE: FEB, 1977
0000    47 ;
0000    48 ; MODIFIED BY:
0000    49 ;
0000    50 ;          , : VERSION
0000    51 ; 01     -
0000    52 ;--
```

```
0000     54          .SBTTL  DECLARATIONS
0000     55 ;
0000     56 ; INCLUDE FILES:
0000     57 ;
0000     58          $PRVDEF                         ; PRIVILEGE BIT DEFINITIONS
0000     59          $PHDDEF                         ; PROCESS HEADER OFFSETS
0000     60 ;
0000     61 ; MACROS:
0000     62 ;
0000     63 ;
0000     64 ; EQUATED SYMBOLS:
0000     65 ;
0000     66 ;
0000     67 ; OWN STORAGE:
0000     68 ;
```

```
                         00000000     70          .PSECT  RODATA,RD,NOWRT,NOEXE,LONG
                             0000     71 TEST_MOD_NAME:: STRING  C,<SATSSS39>     ; TEST MODULE NAME
                             0009     72 TEST_MOD_NAME_D: STRING I,<SATSSS39>     ; TEST MODULE NAME DESCRIPTOR
                             0019     73 MSG1_INP_CTL:   STRING  I,<  SSHIB!4ZW: CONDITIONS:>
                             0039     74                                          ; FAO CTL STRING FOR MSG1 IN SUCCOMMON.MAR
                             0039     75 MSG3_ERR_CTL::  STRING  I,< *SSHIB!4ZW: !AS>
                             0051     76                                          ; FAO CTL STRING FOR MSG3 IN SUCCOMMON.MAR
                 FFFFFFFF F70F2E80   0051     77 DAYTIM_STM:     .LONG   -10*1000*1000*15,-1 ; 15 SECONDS IN 100-NANOSECOND UNITS
```

```
                00000000     79          .PSECT  RWDATA,RD,WRT,NOEXE,LONG
00000008  0000  80 PRIVMASK:               .BLKQ   1                       ; ADDR OF PRIVILEGE MASK (IN PHD)
```

```
                        82          .SBTTL  CONDITION TABLES
                        83 ;
                        84 ;        ***** CONDITION TABLES FOR HIBER SYSTEM SERVICE *****
                        85 ;
                        86          COND    1,NOTARG,<ORDER OF WAKE & HIBER>,-
                        87                    <WAKE BEFORE HIBER>,-
                        88                    <HIBER BEFORE WAKE>,-
                        89
                        90          COND    2,NULL
                        91
                        92          COND    3,NULL
                        93
                        94          COND    4,NULL
                        95
                        96          COND    5,NULL
                        97
                        98          .PSECT  SATSSS39,RD,WRT,EXE
```

```
                                        .SBTTL  TM_SETUP, TM_CLEANUP
                                ;++
                                ; FUNCTIONAL DESCRIPTION:
                                ;
                                ;               TM_SETUP AND TM_CLEANUP ARE CALLED TO PERFORM
                                ; REQUIRED HOUSEKEEPING AT THE BEGINNING AND END, RESPECTIVELY, OF
                                ; TEST MODULE EXECUTION.
                                ;
                                ; CALLING SEQUENCE:
                                ;
                                ;       BSBW TM_SETUP   BSBW TM_CLEANUP
                                ;
                                ; INPUT PARAMETERS:
                                ;
                                ;       NONE
                                ;
                                ; IMPLICIT INPUTS:
                                ;
                                ;       NONE
                                ;
                                ; OUTPUT PARAMETERS:
                                ;
                                ;       NONE
                                ;
                                ; IMPLICIT OUTPUTS:
                                ;
                                ;       TM_SETUP:  COND TABLE INDEX REGISTERS (R2,3,4,5,6) CLEARED;
                                ;                  ALL PRIVILEGES ACQUIRED.
                                ;
                                ; COMPLETION CODES:
                                ;
                                ;       EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
                                ;
                                ; SIDE EFFECTS:
                                ;
                                ;       SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
                                ;       (VIA RSB) IF ERROR ENCOUNTERED.
                                ;
                                ;--
                                
                                
                                TM_SETUP::
                        52  D4 0000                CLRL    R2                      ; INITIALIZE
                        53  D4 0002                CLRL    R3                      ; .. CONDITION
                        54  D4 0004                CLRL    R4                      ; .... TABLE
                        55  D4 0006                CLRL    R5                      ; ...... INDEX
                        56  D4 0008                CLRL    R6                      ; ........ REGISTERS
                    FFF3'   30 000A                BSBW    MOD_MSG_PRINT           ; PRINT TEST MODULE BEGIN MSG
00000000'EF     00000000'EF DE 000D                MOVAL   TEST_MOD_SUCC,TMD_ADDR  ; ASSUME END MSG WILL SHOW SUCCESS
   03   00     00000000'8F F0 0018                INSV    #SUCCESS,#0,#3,MOD_MSG_CODE ; ADJUST STATUS CODE FOR SUCCESS
               00000000'EF    0020
                              0025                MODE    TO,5$,KRNL              ; KERNEL MODE TO ACCESS PHD
        59     00000000'9F    D0 0048             MOVL    @#CTL$GL_PHD,R9         ; GET PROCESS HEADER ADDRESS
        00000000'EF    69     DE 004F             MOVAL   PHD$Q_PRIVMSK(R9),PRIVMASK ; GET PRIV MASK ADDRESS
                              0056                MODE    FROM,5$ ; BACK TO USER MODE
                              0057                PRIV    ADD,ALL                 ; GET ALL PRIVILEGES
```

```
                     0077   156          $SETPRN_S TEST_MOD_NAME_D       ; SET PROCESS NAME
                     0084   157          SS_CHECK  NORMAL                ; CHECK STATUS CODE RETURNED FROM SETPRN
               05    00B2   158          RSB                             ; RETURN TO MAIN ROUTINE
                     00B3   159 TM_CLEANUP::
          FF4A'  30  00B3   160          BSBW    MOD_MSG_PRINT           ; PRINT TEST MODULE END MSG
               05    00B6   161          RSB                             ; RETURN TO MAIN ROUTINE
```

```
                        00B7   163          .SBTTL  CONDITION SUBROUTINES - SETUP AND CLEANUP
                        00B7   164 ;++
                        00B7   165 ; FUNCTIONAL DESCRIPTION:
                        00B7   166 ;
                        00B7   167 ;                   CONDX AND CONDX_CLEANUP ARE SUBROUTINES WHICH ARE EXECUTED
                        00B7   168 ; BEFORE AND AFTER THE VERIFY SUBROUTINE, RESPECTIVELY, WHENEVER A NEW
                        00B7   169 ; CONDITION X VALUE IS SELECTED (SEE FUNCTIONAL DESCRIPTION OF SUCCOMMON
                        00B7   170 ; ROUTINE IN SUCCOMMON.MAR). ANY SETUP FUNCTION PARTICULAR TO THE
                        00B7   171 ; CONDITION X TABLE IS INCLUDED IN THE CONDX SUBROUTINE AND CLEANED
                        00B7   172 ; UP, IF NECESSARY, IN THE CONDX_CLEANUP SUBROUTINE. THIS INCLUDES,
                        00B7   173 ; ESPECIALLY, CODE TO DETECT CONFLICTS AMONG CURRENT ENTRIES IN TWO
                        00B7   174 ; OR MORE CONDITION TABLES. IF A CONFLICT IS DETECTED, A NON-ZERO
                        00B7   175 ; VALUE IS STORED INTO CONFLICT, WHICH CAUSES THE CALLING ROUTINE
                        00B7   176 ; (SUCCOMMON) TO SKIP THE CURRENT ENTRY IN THE CONDITION X TABLE.
                        00B7   177 ;
                        00B7   178 ; CALLING SEQUENCE:
                        00B7   179 ;
                        00B7   180 ;       BSBW CONDX   BSBW CONDX_CLEANUP
                        00B7   181 ;         WHERE X = 1,2,3,4,5
                        00B7   182 ;
                        00B7   183 ; INPUT PARAMETERS:
                        00B7   184 ;
                        00B7   185 ;       CONFLICT = 0
                        00B7   186 ;
                        00B7   187 ; IMPLICIT INPUTS:
                        00B7   188 ;
                        00B7   189 ;       R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
                        00B7   190 ;         FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
                        00B7   191 ;
                        00B7   192 ; OUTPUT PARAMETERS:
                        00B7   193 ;
                        00B7   194 ;       CONFLICT SET TO NON-ZERO IF COND TABLE CONFLICT DETECTED.
                        00B7   195 ;
                        00B7   196 ; IMPLICIT OUTPUTS:
                        00B7   197 ;
                        00B7   198 ;       R2,3,4,5,6 PRESERVED
                        00B7   199 ;
                        00B7   200 ; COMPLETION CODES:
                        00B7   201 ;
                        00B7   202 ;       NONE
                        00B7   203 ;
                        00B7   204 ; SIDE EFFECTS:
                        00B7   205 ;
                        00B7   206 ;       NONE
                        00B7   207 ;
                        00B7   208 ;--
                        00B7   209
                        00B7   210
                        00B7   211
                        00B7   212 COND1::
                  05    00B7   213          RSB                             ; RETURN TO MAIN ROUTINE
                        00B8   214 COND1_CLEANUP::
                  05    00B8   215          RSB                             ; RETURN TO MAIN ROUTINE
                        00B9   216 COND2::
                  05    00B9   217          RSB                             ; RETURN TO MAIN ROUTINE
                        00BA   218 COND2_CLEANUP::
                  05    00BA   219          RSB                             ; RETURN TO MAIN ROUTINE
```

```
                00BB    220 COND3::
 05             00BB    221         RSB                         ; RETURN TO MAIN ROUTINE
                00BC    222 COND3_CLEANUP::
 05             00BC    223         RSB                         ; RETURN TO MAIN ROUTINE
                00BD    224 COND4::
 05             00BD    225         RSB                         ; RETURN TO MAIN ROUTINE
                00BE    226 COND4_CLEANUP::
 05             00BE    227         RSB                         ; RETURN TO MAIN ROUTINE
                00BF    228 COND5::
 05             00BF    229         RSB                         ; RETURN TO MAIN ROUTINE
                00C0    230 COND5_CLEANUP::
 05             00C0    231         RSB                         ; RETURN TO MAIN ROUTINE
```

```
                     00C1    233          .SBTTL  FORM_CONDS
                     00C1    234 ;++
                     00C1    235 ; FUNCTIONAL DESCRIPTION:
                     00C1    236 ;
                     00C1    237 ;               FORM_CONDS FORMATS AND PRINTS INFORMATION ABOUT
                     00C1    238 ;  THE CURRENT ELEMENT IN EACH OF THE CONDITION TABLES.
                     00C1    239 ;
                     00C1    240 ; CALLING SEQUENCE:
                     00C1    241 ;
                     00C1    242 ;       BSBW FORM_CONDS
                     00C1    243 ;
                     00C1    244 ; INPUT PARAMETERS:
                     00C1    245 ;
                     00C1    246 ;       NONE
                     00C1    247 ;
                     00C1    248 ; IMPLICIT INPUTS:
                     00C1    249 ;
                     00C1    250 ;       R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
                     00C1    251 ;         FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
                     00C1    252 ;       FOR X = 1,2,3,4,5 :
                     00C1    253 ;               CONDX_T - TITLE TEXT FOR CONDX TABLE
                     00C1    254 ;               CONDX_TAB - ELEMENT TEXT FOR CONDX TABLE
                     00C1    255 ;               CONDX_C - CONTEXT OF THE CONDX TABLE
                     00C1    256 ;               CONDX_E - DATA ELEMENTS OF THE CONDX TABLE
                     00C1    257 ;
                     00C1    258 ; OUTPUT PARAMETERS:
                     00C1    259 ;
                     00C1    260 ;       NONE
                     00C1    261 ;
                     00C1    262 ; IMPLICIT OUTPUTS:
                     00C1    263 ;
                     00C1    264 ;       NONE
                     00C1    265 ;
                     00C1    266 ; COMPLETION CODES:
                     00C1    267 ;
                     00C1    268 ;       NONE
                     00C1    269 ;
                     00C1    270 ; SIDE EFFECTS:
                     00C1    271 ;
                     00C1    272 ;       NONE
                     00C1    273 ;
                     00C1    274 ;--
                     00C1    275
                     00C1    276
                     00C1    277
                     00C1    278 FORM_CONDS::
                     00C1    279         $FAO_S  MSG1_INP_CTL,FAO_LEN,FAO_DESC,TESTNUM
                     00E0    280                                         ; FORMAT CONDITIONS HEADER MSG
                FF1D'  30    00E0    281         BSBW    OUTPUT_MSG      ; ... AND PRINT IT
              14   00  91    00E3    282         CMPB    #COND1_C,#NULL  ; IS CONDITION 1 NULL ?
                   03  12    00E6    283         BNEQU   10$             ; NO -- CONTINUE
                 00BF  31    00E8    284         BRW     FORM_CONDSX     ; YES -- SUBROUTINE IS FINISHED
                     00EB    285 10$:
  00000000'EF  00000008'EF  DE  00EB    286         MOVAL   COND1_T,MSG_A           ; SAVE ADDRESS OF CONDITION 1 TITLE FOR FAO
00000000'EF  0000001F'EF42  D0  00F6    287         MOVL    COND1_TAB[R2],MSG_B     ; SAVE ADDR OF COND 1 CURR TEXT ELT FOR FAO
        00000000'EF   00    90  0102    288         MOVB    #COND1_C,MSG_CTXT       ; SAVE CONDITION 1 CONTEXT FOR FAO
                     0109    289         MOV_VAL COND1_C,COND1_E[R2],MSG_DATA1 ; GIVE COND 1 DATA VALUE TO FAO
```

```
                                                     I 16
                     FEF4'  30   0109   290          BSBW    WRITE_MSG2                      ; FORMAT AND WRITE CONDITION 1 MSG
                 14    14   91   010C   291          CMPB    #COND2_C,#NULL                  ; IS CONDITION 2 NULL ?
                       03   12   010F   292          BNEQU   20$                             ; NO -- CONTINUE
                     0096   31   0111   293          BRW     FORM_CONDSX                     ; YES -- SUBROUTINE IS FINISHED
                            0114   294 20$:
  00000000'EF    0000004B'EF   DE   0114   295          MOVAL   COND2_T,MSG_A                   ; SAVE ADDRESS OF CONDITION 2 TITLE FOR FAO
00000000'EF    0000004B'EF43   D0   011F   296          MOVL    COND2_TAB[R3],MSG_B             ; SAVE ADDR OF COND 2 CURR TEXT ELT FOR FAO
          00000000'EF    14   90   012B   297          MOVB    #COND2_C,MSG_CTXT               ; SAVE CONDITION 2 CONTEXT FOR FAO
                            0132   298          MOV_VAL COND2_C,COND2_E[R3],MSG_DATA1 ; GIVE COND 2 DATA VALUE TO FAO
                     FECB'  30   0132   299          BSBW    WRITE_MSG2                      ; FORMAT AND WRITE CONDITION 2 MSG
                 14    14   91   0135   300          CMPB    #COND3_C,#NULL                  ; IS CONDITION 3 NULL ?
                       03   12   0138   301          BNEQU   30$                             ; NO -- CONTINUE
                     006D   31   013A   302          BRW     FORM_CONDSX                     ; YES -- SUBROUTINE IS FINISHED
                            013D   303 30$:
  00000000'EF    0000004C'EF   DE   013D   304          MOVAL   COND3_T,MSG_A                   ; SAVE ADDRESS OF CONDITION 3 TITLE FOR FAO
00000000'EF    0000004C'EF44   D0   0148   305          MOVL    COND3_TAB[R4],MSG_B             ; SAVE ADDR OF COND 3 CURR TEXT ELT FOR FAO
          00000000'EF    14   90   0154   306          MOVB    #COND3_C,MSG_CTXT               ; SAVE CONDITION 3 CONTEXT FOR FAO
                            015B   307          MOV_VAL COND3_C,COND3_E[R4],MSG_DATA1 ; GIVE COND 3 DATA VALUE TO FAO
                     FEA2'  30   015B   308          BSBW    WRITE_MSG2                      ; FORMAT AND WRITE CONDITION 3 MSG
                 14    14   91   015E   309          CMPB    #COND4_C,#NULL                  ; IS CONDITION 4 NULL ?
                       47   13   0161   310          BEQLU   FORM_CONDSX                     ; YES -- SUBROUTINE IS FINISHED
  00000000'EF    0000004D'EF   DE   0163   311          MOVAL   COND4_T,MSG_A                   ; SAVE ADDRESS OF CONDITION 4 TITLE FOR FAO
00000000'EF    0000004D'EF45   D0   016E   312          MOVL    COND4_TAB[R5],MSG_B             ; SAVE ADDR OF COND 4 CURR TEXT ELT FOR FAO
          00000000'EF    14   90   017A   313          MOVB    #COND4_C,MSG_CTXT               ; SAVE CONDITION 4 CONTEXT FOR FAO
                            0181   314          MOV_VAL COND4_C,COND4_E[R5],MSG_DATA1 ; GIVE COND 4 DATA VALUE TO FAO
                     FE7C'  30   0181   315          BSBW    WRITE_MSG2                      ; FORMAT AND WRITE CONDITION 4 MSG
                 14    14   91   0184   316          CMPB    #COND5_C,#NULL                  ; IS CONDITION 5 NULL ?
                       21   13   0187   317          BEQLU   FORM_CONDSX                     ; YES -- SUBROUTINE IS FINISHED
  00000000'EF    0000004E'EF   DE   0189   318          MOVAL   COND5_T,MSG_A                   ; SAVE ADDRESS OF CONDITION 5 TITLE FOR FAO
00000000'EF    0000004E'EF46   D0   0194   319          MOVL    COND5_TAB[R6],MSG_B             ; SAVE ADDR OF COND 5 CURR TEXT ELT FOR FAO
          00000000'EF    14   90   01A0   320          MOVB    #COND5_C,MSG_CTXT               ; SAVE CONDITION 5 CONTEXT FOR FAO
                            01A7   321          MOV_VAL COND5_C,COND5_E[R6],MSG_DATA1 ; GIVE COND 5 DATA VALUE TO FAO
                     FE56'  30   01A7   322          BSBW    WRITE_MSG2                      ; FORMAT AND WRITE CONDITION 5 MSG
                            01AA   323 FORM_CONDSX:
                       05   01AA   324          RSB                                     ; RETURN TO CALLER
```

```
                                J 16
01AB   326          .SBTTL  VERIFY
01AB   327 ;++
01AB   328 ; FUNCTIONAL DESCRIPTION:
01AB   329 ;
01AB   330 ;                    VERIFY IS CALLED ONCE FOR EACH COMBINATION OF CONDITION
01AB   331 ; TABLE VALUES (AS DETERMINED BY THE INDEX REGISTERS R2,3,4,5,6 FOR
01AB   332 ; COND TABLES 1,2,3,4,5, RESPECTIVELY). VERIFY ESTABLISHES THE CONDITIONS
01AB   333 ; SPECIFIED BY THE COND TABLES AND ISSUES THE SUBJECT SYSTEM SERVICE
01AB   334 ; ($HIBER). THEN, THE SUCCESSFUL OPERATION OF THE SERVICE IS VERIFIED
01AB   335 ; BY EXAMINING THE STATUS CODE RETURNED, THE VALUES FOR RETURN ARGUMENTS
01AB   336 ; AND THE FUNCTIONALITY PERFORMED. THE EXAMINATIONS TAKE THE FORM OF
01AB   337 ; COMPARISONS AGAINST EXPECTED VALUES. ANY FAILING COMPARISON CAUSES AN
01AB   338 ; ERR_EXIT MACRO TO BE EXECUTED (EITHER DIRECTLY, OR INDIRECTLY,
01AB   339 ; THROUGH THE SS_CHECK MACRO); ERR_EXIT SETS EFLAG TO NON-ZERO,
01AB   340 ; PRINTS ERROR MESSAGES AND CAUSES AN IMMEDIATE RSB TO CALLER.
01AB   341 ; WHEN ERR_EXIT IS EXECUTED, FURTHER CALLS TO VERIFY ARE SUPPRESSED,
01AB   342 ; AND, AFTER EXECUTING CLEANUP SUBROUTINES, THE IMAGE EXITS.
01AB   343 ;
01AB   344 ; CALLING SEQUENCE:
01AB   345 ;
01AB   346 ;       BSBW VERIFY
01AB   347 ;
01AB   348 ; INPUT PARAMETERS:
01AB   349 ;
01AB   350 ;       NONE
01AB   351 ;
01AB   352 ; IMPLICIT INPUTS:
01AB   353 ;
01AB   354 ;       R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
01AB   355 ;         FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
01AB   356 ;       FOR X = 1,2,3,4,5 :
01AB   357 ;               CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
01AB   358 ;                 TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
01AB   359 ;                 ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
01AB   360 ;                 FOR CONDX_E.
01AB   361 ;
01AB   362 ; OUTPUT PARAMETERS:
01AB   363 ;
01AB   364 ;       NONE
01AB   365 ;
01AB   366 ; IMPLICIT OUTPUTS:
01AB   367 ;
01AB   368 ;       VERIFY HAS NO OUTPUT. SINCE ITS PURPOSE IS TO TEST FOR ERRORS,
01AB   369 ;       IT MERELY RETURNS TO CALLER NORMALLY AFTER THE TESTS, PROVIDING
01AB   370 ;       ALL WERE SUCCESSFUL; IF AN ERROR IS DISCOVERED, RETURN IS VIA
01AB   371 ;       AN ERR_EXIT OR SS_CHECK MACRO, BOTH OF WHICH DOCUMENT DETECTED
01AB   372 ;       ERRORS.
01AB   373 ;
01AB   374 ; COMPLETION CODES:
01AB   375 ;
01AB   376 ;       EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
01AB   377 ;
01AB   378 ; SIDE EFFECTS:
01AB   379 ;
01AB   380 ;       SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
01AB   381 ;       (VIA RSB) IF ERROR ENCOUNTERED.
01AB   382 ;
```

```
                     01AB   383 ;--
                     01AB   384
                     01AB   385
                     01AB   386
                     01AB   387 VERIFY::
00000000'EF   95    01AB   388          TSTB    CFLAG                   ; SHOULD CONDITIONS BE PRINTED ?
          03   13    01B1   389          BEQL    5$                      ; NO -- CONTINUE
        FF0B   30    01B3   390          BSBW    FORM_CONDS              ; YES -- FMT & PRINT ALL CONDS FOR THIS T.C.
                     01B6   391 5$:
          52   95    01B6   392          TSTB    R2                      ; FIRST CONDITION 1 ELEMENT ?
          03   13    01B8   393          BEQL    40$                     ; YES -- PROCESS IT
        0190   31    01BA   394          BRW     50$                     ; NO -- GO PROCESS 2ND ELEMENT
                     01BD   395 40$:
                     01BD   396          $WAKE_S                         ; A SERIES OF WAKES BEFORE HIBER
                     01C8   397          SS_CHECK NORMAL                 ; CHECK FOR NORMAL RETURN
                     01F6   398          $WAKE_S                         ; ONLY ONE WAKE SHOULD REMAIN OUTSTANDING
                     0201   399          SS_CHECK NORMAL                 ; .....
                     022F   400          $WAKE_S                         ; .....
                     023A   401          SS_CHECK NORMAL                 ; .....
                     0268   402          $WAKE_S                         ; .....
                     0273   403          SS_CHECK NORMAL                 ; .....
                     02A1   404          $WAKE_S                         ; .....
                     02AC   405          SS_CHECK NORMAL                 ; .....
                     02DA   406 ;
                     02DA   407 ; ****** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE ******
                     02DA   408 ;
                     02DA   409          $HIBER_S
00000000'8F   50    02E1   410          CMPL    R0,#SS$_NORMAL          ; DID IT RETURN NORMALLY ?
          03   12    02E8   411          BNEQU   10$                     ; NO -- PROCESS ERROR
        0121   31    02EA   412          BRW     VERIFYX                 ; YES -- TIME TO LEAVE
                     02ED   413 10$:
00000000'EF   00000000'8F   D0   02ED   414          MOVL    #SS$_NORMAL,EXPV        ; LOAD UP EXPECTED AND
00000000'EF   50    D0    02F8   415          MOVL    R0,RECV                 ; ... RECEIVED VALUES, THEN EXIT
                     02FF   416          ERR_EXIT LONG,<INCORRECT STATUS CODE RETURNED FROM HIBER>
                     034D   417 50$:
                     034D   418          $SETAST_S       #1              ; ENABLE USER MODE AST'S
                     0356   419          $SETIMR_S ,DAYTIM_STM,WAKAST    ; SCHEDULE AST IN 15 SECONDS
                     036D   420          SS_CHECK NORMAL                 ; CHECK SETIMR RETURN
                     039B   421 ;
                     039B   422 ; ****** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE ******
                     039B   423 ;
                     039B   424          $HIBER_S
00000000'8F   50    D1    03A2   425          CMPL    R0,#SS$_NORMAL          ; DID IT RETURN NORMALLY ?
          03   12    03A9   426          BNEQU   60$                     ; NO -- PROCESS ERROR
        0060   31    03AB   427          BRW     VERIFYX                 ; YES -- TIME TO LEAVE
                     03AE   428 60$:
00000000'EF   00000000'8F   D0   03AE   429          MOVL    #SS$_NORMAL,EXPV        ; LOAD UP EXPECTED AND
00000000'EF   50    D0    03B9   430          MOVL    R0,RECV                 ; ... RECEIVED VALUES, THEN EXIT
                     03C0   431          ERR_EXIT LONG,<INCORRECT STATUS CODE RETURNED FROM HIBER>
                     040E   432 VERIFYX:
                     040E   433          RSB                             ; RETURN TO CALLER
```

```
                     040F    435          .SBTTL  VFY_CLEANUP
                     040F    436 ;++
                     040F    437 ; FUNCTIONAL DESCRIPTION:
                     040F    438 ;
                     040F    439 ;               VFY_CLEANUP EXECUTES SYSTEM SERVICES TO UNDO THE
                     040F    440 ; EFFECT OF THOSE ISSUED IN THE VERIFY SUBROUTINE. VFY_CLEANUP MUST
                     040F    441 ; ASSUME THAT VERIFY MAY NOT HAVE EXECUTED IN ITS ENTIRETY (IF AN
                     040F    442 ; ERROR IS FOUND). ALSO, VFY_CLEANUP MAY ISSUE SS_CHECK OR ERR_EXIT
                     040F    443 ; ONLY AFTER PERFORMING ALL OF ITS CLEANUP OPERATIONS; THIS IS REQUIRED
                     040F    444 ; IN THE EVENT THAT VFY_CLEANUP IS CALLED DURING ERROR PROCESSING,
                     040F    445 ; WHEN PERFORMING THE REQUIRED CLEANUP IS MORE IMPORTANT THAN
                     040F    446 ; POSSIBLY DISCOVERING A SECOND ERROR.
                     040F    447 ;
                     040F    448 ; CALLING SEQUENCE:
                     040F    449 ;
                     040F    450 ;       BSBW VFY_CLEANUP
                     040F    451 ;
                     040F    452 ; INPUT PARAMETERS:
                     040F    453 ;
                     040F    454 ;       NONE
                     040F    455 ;
                     040F    456 ; IMPLICIT INPUTS:
                     040F    457 ;
                     040F    458 ;       R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
                     040F    459 ;         FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
                     040F    460 ;       FOR X = 1,2,3,4,5 :
                     040F    461 ;               CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
                     040F    462 ;                 TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
                     040F    463 ;                 ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
                     040F    464 ;                 FOR CONDX_E.
                     040F    465 ;
                     040F    466 ; OUTPUT PARAMETERS:
                     040F    467 ;
                     040F    468 ;       NONE
                     040F    469 ;
                     040F    470 ; IMPLICIT OUTPUTS:
                     040F    471 ;
                     040F    472 ;       NONE
                     040F    473 ;
                     040F    474 ; COMPLETION CODES:
                     040F    475 ;
                     040F    476 ;       EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
                     040F    477 ;
                     040F    478 ; SIDE EFFECTS:
                     040F    479 ;
                     040F    480 ;       SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
                     040F    481 ;       (VIA RSB) IF ERROR ENCOUNTERED.
                     040F    482 ;
                     040F    483 ;--
                     040F    484
                     040F    485
                     040F    486
                     040F    487 VFY_CLEANUP::
05                   040F    488          RSB                                ; RETURN TO CALLER
```

```
                     0410   490          .SBTTL  WAKAST
                     0410   491 WAKAST:
                0000 0410   492          .WORD   0                       ; ENTRY MASK TO WAKAST
              0001  30 0412   493          BSBW    10$                     ; EXECUTE AST -- SS_CHECK MUST BE IN SUBRTN
                    04 0415   494          RET                             ; RETURN FROM AST
                     0416   495 10$:
                     0416   496          $WAKE_S                         ; WAKE UP HIBERNATING TEST MODULE
                     0421   497          SS_CHECK NORMAL                 ; CHECK WAKE RETURN
                    05 044F   498          RSB                             ; RETURN TO CALLER
                     0450   499          .END
```

```
$$$$                    = 000003CA R     04
$$$CHARS                = 00000029
$$$CHARS1               = 00000011
$$$CHARS2               = 00000011
$$$CHARS3               = 00000000
$$$CHARS4               = 00000000
$$$CHARS5               = 00000000
$$$COND_A               = 00000001
$$$STRINGS              = 00000001
$$$STRINGS2             = 00000005
$$T1                    = 00000000
$$T2                    = 00000004
BYTE                    = 00000001  G
CFLAG                     ********    X   04
CHMRTN                    ********    X   04
CHM_CONT                  ********    X   04
COMP_SC                   ********    X   04
CONDT                     000000B7 RG     04
COND1_C                 = 00000000
COND1_CLEANUP             000000B8 RG     04
COND1_E                   0000004B R      03
COND1_H                   0000001E RG     03
COND1_T                   00000008 R      03
COND1_TAB                 0000001F R      03
COND2                     000000B9 RG     04
COND2_C                 = 00000014
COND2_CLEANUP             000000BA RG     04
COND2_H                   0000004B RG     03
COND2_T                   0000004B R      03
COND2_TAB                 0000004B R      03
COND3                     000000BB RG     04
COND3_C                 = 00000014
COND3_CLEANUP             000000BC RG     04
COND3_H                   0000004C RG     03
COND3_T                   0000004C R      03
COND3_TAB                 0000004C R      03
COND4                     000000BD RG     04
COND4_C                 = 00000014
COND4_CLEANUP             000000BE RG     04
COND4_H                   0000004D RG     03
COND4_T                   0000004D R      03
COND4_TAB                 0000004D R      03
COND5                     000000BF RG     04
COND5_C                 = 00000014
COND5_CLEANUP             000000C0 RG     04
COND5_H                   0000004E RG     03
COND5_T                   0000004E R      03
COND5_TAB                 0000004E R      03
CTL$GL_PHD                ********      X 04
DAYTIM_STM                00000051 R      02
DESC                    = 00000010  G
EFLAG                     ********      X 04
EXPV                      ********      X 04
FAO_DESC                  ********      X 04
FAO_LEN                   ********      X 04
FORM_CONDS                000000C1 RG     04
FORM_CONDSX               000001AA R      04
LONG                    = 00000004  G
MOD_MSG_CODE              ********      X 04
MOD_MSG_PRINT             ********      X 04
MSGT_INP_CTL              00000019 R      02
MSG3_ERR_CTL              00000039 RG     02
MSG_A                     ********      X 04
MSG_B                     ********      X 04
MSG_CTXT                  ********      X 04
NOTARG                  = 00000000  G
NULL                    = 00000014  G
OUTPUT_MSG                ********      X 04
PCV                       ********      X 04
PHD$Q_PRIVMSK           = 00000000
PRIVMASK                  00000000 R      03
PRIV_ARGS               = 00000002
PROCESS_ERR               ********      X 04
QUAD                    = 00000008  G
RECV                      ********      X 04
REST_REGS                 ********      X 04
SAVE_REGS                 ********      X 04
SS$_NORMAL                ********      X 04
SUCCESS                   ********      X 04
SYS$CMKRNL                ********     GX 04
SYS$FAO                   ********      X 04
SYS$HIBER                 ********     GX 04
SYS$SETAST                ********     GX 04
SYS$SETIMR                ********     GX 04
SYS$SETPRN                ********     GX 04
SYS$SETPRV                ********     GX 04
SYS$WAKE                  ********     GX 04
TESTNUM                   ********      X 04
TEST_MOD_NAME             00000000 RG     02
TEST_MOD_NAME_D           00000009 R      02
TEST_MOD_SUCC             ********      X 04
TMD_ADDR                  ********      X 04
TM_CLEANUP                000000B3 RG     04
TM_SETUP                  00000000 RG     04
VERIFY                    000001AB RG     04
VERIFYX                   0000040E R      04
VFY_CLEANUP               0000040F RG     04
WAKAST                    00000410 R      04
WORD                    = 00000002  G
WRITE_MSG2                ********      X 04
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
ABS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
RODATA	00000059 (89.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC LONG
RWDATA	0000004F (79.)	03 (3.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC LONG
SATSSS39	00000450 (1104.)	04 (4.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	35	00:00:00.09	00:00:00.38
Command processing	138	00:00:00.62	00:00:01.64
Pass 1	230	00:00:05.66	00:00:10.88
Symbol table sort	0	00:00:00.43	00:00:00.49
Pass 2	103	00:00:01.55	00:00:01.99
Symbol table output	13	00:00:00.08	00:00:00.08
Psect synopsis output	3	00:00:00.02	00:00:00.06
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	524	00:00:08.45	00:00:15.52

The working set limit was 1500 pages.
29210 bytes (58 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 294 non-local and 31 local symbols.
499 source lines were read in Pass 1, producing 23 object records in Pass 2.
36 pages of virtual memory were used to define 27 macros.

Macro library statistics

Macro library name	Macros defined
_255DUA28:[SHRLIB]UETP.MLB;1	8
_255DUA28:[SYS.OBJ]LIB.MLB;1	1
_255DUA28:[SYSLIB]STARLET.MLB;2	15
TOTALS (all libraries)	24

632 GETS were required to define 24 macros.

There were no errors, warnings or information messages.

```
MACRO/LIS=LIS$:SATSSS39/OBJ=OBJ$:SATSSS39 MSRC$:SATSSS39/UPDATE=(ENH$:SATSSS39)+EXECML$/LIB+SHRLIB$:UETP/LIB
```

SATSSS35
LIS

SATSSS26
LIS

SATSSS38
LIS

SATSS530
LIS

SATSSS37
LIS

SATSSS39
LIS

SATSSS36
LIS

SATSS552
LIS

SATSS542
LIS

SATSS540
LIS

SATSS550
LIS

SATSS544
LIS

SATSS546
LIS

SATSS543
LIS

SATSS545
LIS

SATSS541
LIS

SATSS547
LIS